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supply warned us to leave off, or else to refill the tube with charcoal, and we never after had any explosion.

CORNELIUS VARLEY.

1 Charles Street, Clarendon Square,
October, 1841.

No. III.

PREPARED VEGETABLE JUICES.

The SILVER MEDAL was presented to Mr. EDWARD BENTLEY, 41 Moorgate Street, for the following Communication on his Method of obtaining the more Powerful Vegetable Preparations for Medical Use. Samples of the Juices are deposited in the Society's Repository.

At the present time a difference of opinion exists as to the best method of administering the more Powerful Vegetable Preparations of the *Materia Medica*.

Most practitioners, I believe, are willing to concede that the Extracts and Tinctures, as at present prepared, are not uniform in their action ; and that not unfrequently their skill is frustrated by the inadequacy of the preparation they administer.

I am aware that the dried powder of the leaves is by some persons considered to possess the whole properties of the plant ; and I do not doubt that when the powder is fresh it may do so : but it is essential to bear in mind that light acts as a decomposing agent, and that much precaution is necessary to prevent chemical action dissipating the principle upon which its efficacy depends.

It will be my endeavour to shew, by a process equally simple as that at present employed for obtaining the extracts and tinctures, that we may procure a preparation, uniform in strength, certain in its action, and not decomposed by light.

It has been frequently urged, and with some degree of truth, that vegetables vary according to the season when they are gathered, and the nature of the soil from whence they are procured; but I am not willing to attribute so much to this cause as to the careless, and at present, defective method of manipulating.

In the preparation of extracts the main point to be attended to is equality of temperature.

My observation on this point has been extensive; and I am fully persuaded that a temperature above 120° Farn. is sufficient to volatilise the principle upon which their efficacy depends.

The manner in which the leaves are dried equally affects the strength of the tincture. The plan which I have adopted and am about to detail, has elicited such valuable opinions from those best acquainted with the subject, that I am induced to believe it worthy of the particular attention of the profession. It is by preserving the expressed juices of the plants in the following manner:

The plant being carefully selected from its healthy character and full maturity, the leaves, stem, and when advisable the root, are well bruised in a marble mortar, and then placed in a powerful wooden press.

The juice thus collected is allowed to stand, in order that a deposition of feculent matter may take place, which usually does in very large quantities in the course of twenty-four hours. Alcohol, 56° over proof, is then added, in the proportion of four fluid ounces to every sixteen

fluid ounces of the juice, which is quite sufficient to render the preservation complete, and throw down any mucilage which may be mechanically suspended.

After standing for twenty-fours, the juice filtered through bibulous paper (that made from wool is the best) will be found to retain the whole virtues of the plant for any length of time.

It may be as well to state that the best time for gathering the plant is just as it is coming into flower.

The juices which I have thus prepared, and which have been put to the test of experience, are those of Conium, Digitalis, Belladonna, Hyoscyamus, Taraxacum, and Artemisia Vulgaris.

I have prepared a supply of each of these juices, according to the mode previously described, which may be obtained on application at my establishment; and it is my intention, as speedily as possible, to preserve the expressed juices of other vegetables in a similar manner.

EDWARD BENTLEY.

Laboratory, 41 Moorgate Street.

SIR,

IN answer to your inquiries concerning the effects of the expressed juices of digitalis, hyoscyamus, and belladonna, with which you favoured me, I have much pleasure in stating that the trials which have been made under my direction, at the London Hospital, have proved the superiority of your mode of preparing these important remedies.

I am, &c. &c.

W. J. LITTLE, M.D.

Assistant-Physician to the
London Hospital.

Mr. EDWARD BENTLEY.

DEAR SIR,

I THINK your method of preparing certain tinctures, as tincture of hemlock, by adding rectified spirit to the expressed juices of the plants, a great improvement on the ordinary method, and calculated to obtain uninjured the activity of the plants employed. The samples of the tinctures given by you to me are the best I have seen.

The process of the Edinburgh Pharmacopœia for 1839 for making tincture of hemlock, though an improvement on preceding methods, is inferior to yours in several respects. The percolation which is directed is unnecessary, and in your process is entirely dispensed with. The substitution of simple spirit for tincture of cardamoms, has the advantage of yielding a tincture, the active properties of which may be judged of by the colour, taste, and smell, and by the action of potash on the resulting compound.

Ever yours, &c. &c.

JONATHAN PEREIRA.

Lecturer in the Medical School of the London Hospital,
and at the Aldersgate School of Medicine.

Mr. EDWARD BENTLEY.

No. IV.

GALVANIC TEST APPARATUS FOR ARSENIC.

The Thanks of the Society were presented to Mr. W. J. T. MORTON, Royal Veterinary College, Camden Town, for the following Communication of his Method of Testing the Presence of Arsenic.

THIS apparatus has been invented with a view to obviate one of the objections raised against Marsh's mode of